

REMARKS

This amendment is responsive to the Non-Final Office Action of December 5, 2008. Reconsideration and allowance of claims 54-96 and 98-104 are requested.

Claims 54-104 are pending in the application.

Claim 97 is cancelled.

Claims 54, 74, 81, 85, 91, 92, 94, 96, 100, and 104 are amended.

The Office Action

Claims 81-90 were withdrawn from consideration. Applicants have amended claim 81 to depend from claim 54, accordingly, it is respectfully requested that should claim 54 be found to be allowable, that claims 81-90 be rejoined.

The specification and drawings were objected to for failing to comply with 37 CFR 1.84(p)(5) for improper reference signs.

Claims 54-80, 92-95, and 104 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to distinctly claim the invention..

Claims 94-95, 97, and 104 were objected to.

Claim 104 was objected to for informalities.

Claims 91-93, 96, and 98-103 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,867,799 to Grebinski.

Claims 54-80 and 94-95 were considered to be allowable if rewritten in order to overcome the 35 U.S.C. §112, second paragraph, rejections.

Claims 94-95 and 97 were objected to as being dependent upon a rejected base claim, but were considered to be allowable if rewritten in independent form.

Claim 104 was considered to be allowable if rewritten in order to overcome the 35 U.S.C. §112, second paragraph, rejections and antecedent basis problem.

Objections

The specification has been amended to indicate that an exemplary heater is shown in FIGURE 3.

Paragraph [0048] has been amended to label the source as 32.

Claim 104 has been amended as suggested.

Accordingly, it is requested that the objections to the specifications and claims be withdrawn.

§112 Rejections

Claim 54 has been amended to call for subjecting the pathogenic chemical agent to a peroxide in the form of a vapor in the presence of a nitrogen containing compound, as supported by the specification at paragraphs [0028]-[0033] and FIGS. 6-11, and paragraph [0056].

Claim 92 has been amended to remove the term "for a sufficient time" and to call for reducing the concentration of the chemical agent to less than 1% of the original concentration by weight, as supported by the specification at paragraph [0060].

Claim 104 has been amended to depend from claim 91, rather than claim 50.

Accordingly, it is respectfully requested that the §112 rejections be withdrawn.

The References of Record

Grebinski teaches contacting ammonia vapor with water vapor and/or hydrogen peroxide vapor adjacent to the surface of a semiconductor wafer to provide a hot mixture comprising at least ammonia and ammonium hydroxide. The hot mixture is impinged on the surface. The contacting is immediately prior to and/or simultaneous with the impinging. Resist is quickly stripped from the surfaces of the semiconductor by this method.

Photoresist materials are used in semiconductor fabrication applications because of their ease of removal by conventional treatments, particularly in the very thin layers used in semiconductor fabrication. They are not representative of organic materials as a whole. One of ordinary skill in the art would have no reason to expect that the stripping composition of Grebinski would have any effect on very different organic molecules, such as GD, which are known to be resistant to hydrogen peroxide. Further, there is no suggestion that the stripping action of Grebinski would reduce the concentration of the photoresist if performed in an enclosure. Rather, the resin is simply removed from the surface.

The Claims Distinguish Patentably Over the References of Record

Claim 91 calls for contacting the item contaminated with GD in an enclosure with a vapor containing a peroxide and ammonia for sufficient time to reduce the concentration of GD to less than about 1% of its initial concentration, the time for the concentration to reach 1% of its initial concentration being less than 6 hours.

Grebinski provides no suggestion that GD could be reduced in concentration to less than 1% of its initial concentration in under 6 hours. Photoresist materials available at the time of Grebinski were typically phenolic Novolak™ resins. The structure of GD is shown in FIG. 6 of the application. As can be seen, it has no phenolic character. Rather, the active P-F moiety is reduced to the P-OH moiety in the exemplary reaction scheme. Such a reaction is not suggested by the effect of Grebinski's composition on the dissolution of photoresist.

Further, at the high temperatures required by Grebinski, any hydrogen peroxide present would rapidly decompose. This is not a problem for Grebinski since photoresist is known to be removed by ammonium hydroxide. For toxic molecules such as GD, which are known to be difficult to destroy, there would be no expectation that Grebinski's composition would be effective.

Accordingly, it is submitted that claim 91, and claim 104 dependent therefrom, distinguish over Grebinski.

Claim 92 recites a method of deactivating a pathogenic chemical agent which includes forming a peroxide vapor, increasing the pH of the vapor with a pH-increasing compound, and subjecting the pathogenic chemical agent to the peroxide at the increased pH to deactivate the chemical agent, thereby reducing the concentration of the chemical agent to less than 1% of the original concentration by weight.

Grebinski makes no suggestion that pathogenic agents could be reduced in concentration to less than 1% of the original concentration by weight. Rather, Grebinski teaches that photoresist can be removed but makes no suggestion that it be reduced in concentration.

Accordingly, it is submitted that claim 92, and claim 93 dependent therefrom, distinguish over Grebinski.

Claim 94, against which no references were raised, has been placed in independent form. Accordingly, it is submitted that claim 94, and claim 95 dependent therefrom, are in condition for allowance.

Claim 96 has been amended to incorporate the subject matter of allowable claim 97. Accordingly, it is submitted that claim 96, and claims 98-103 dependent therefrom, are in condition for allowance.

CONCLUSION

For the reasons set forth above, it is submitted that claims 54-96 and 98-104 (all claims) distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

☒ Remaining Claims, as delineated below:

(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT LESS HIGHEST NUMBER PREVIOUSLY PAID FOR		(3) NUMBER EXTRA
TOTAL CLAIMS	50	- 51 =	0
INDEPENDENT CLAIMS	5	- 5 =	0

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is requested to telephone the undersigned at (216) 363-9000.

Respectfully submitted,

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